

## KAIZEN EVENT IMPROVES PROCESS FLOW, REDUCES WASTE

**ABOUT UNIVERSAL FIBER SYSTEMS.** Universal Fibers manufactures solution-dyed synthetic filament-based fibers. Since its beginning in 1969, the company has built a worldwide reputation for fiber innovation in multiple chemistries. Universal Fibers is one of two business units within Universal Fiber Systems LLC and operates as a subsidiary. The company also provides customized finished products, from solid color singles to ready-to-use packages, recycled carpet fibers, and renewably sourced polymers. Universal Fibers is based in Bristol, Virginia, with just under five hundred workers, and has additional manufacturing facilities in Europe, Thailand, and China.

**THE CHALLENGE.** Universal Fibers had problems with excess inventory and material handling labor, extra traveling distance, and extra costs from storing excess inventory off-site, as revealed by an enterprise-wide Value Stream Mapping (VSM) event conducted by the Manufacturing Technology Center (MTC). A service delivery partner of GENEDGE, part of the MEP National Network, MTC encouraged Universal Fibers to make improvements to those areas of the flow where the company could reduce or eliminate waste.

**MEP CENTER'S ROLE.** Based on the VSM analysis, Universal Fibers decided to participate in a two-day Kaizen improvement event with MTC. The goal of the Kaizen was to remove the most important wastes from the value stream portion that creates the "color concentrate," one of the ingredients utilized in the end product.

MTC led a group of employees through the two-day event to study and create improvement plans for the "color concentrate" portion of the value stream, leading up to extrusion. Participants worked together to map and understand the current process flow. They developed a plan for implementing improvements aimed at reducing inventory, lead time, travel distance, and the number of touches or transactions involved in the process. Reducing the complexity of the process flow reduced labor, energy, and overhead costs for Universal Fibers. The company invested in a new information system and workforce practices, and is continuing to reduce inventory to free up space in the warehouse.

"The Manufacturing Technology Center helped us realize that we didn't need to make major facility changes to increase flow. Through the Kaizen event, we were able to generate a long list of improvement ideas. From there, MTC guided us to focus on key areas that would lead to significant reductions in labor and inventory to help increase overall competitiveness."

-Steve Barrett, Engineering Department Head

## RESULTS



Obtained **\$193,000** in cost savings



Invested **\$60,000** in plant improvements



Reduced inventory by **15%**

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